

study groups. Race notwithstanding, the Fistula First Breakthrough Initiative targets 50% hemodialysis initiation with fistulas, a benchmark beckoning improvement in current ESRD care.

Table. Hemodialysis initiation characteristics for ESRD patients in the United States

	White (n = 264,350)	Black (n = 148,808)	Hispanic (n = 69,830)	P value
Mean age (SD)	65.9 (15.3)	58.4 (15.4)	58.0 (16.6)	<.001
Female (%)	122,066 (41.2)	76,286 (48.1)	32,588 (42.9)	<.001
AVF (%)	40,206 (15.2)	18,663 (12.5)	8,221 (11.8)	<.001
AVG (%)	7,578 (2.9)	7,271 (4.9)	1,785 (2.6)	<.001
IHC (%)	216,566 (81.9)	122,874 (82.6)	59,824 (85.7)	<.001

AVF, Arteriovenous fistula; AVG, arteriovenous graft; ESRD, end-stage renal disease; IHC, intravenous hemodialysis.

Thioglitazones Improve SFA Stenting Primary Patency Rates in Diabetics

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Objectives: Low adiponectin levels are predictive of in-stent restenosis for bare-metal coronary stents. Thioglitazone (TZD) treatment increases adiponectin levels and decreases in-stent restenosis in coronary stents. Adiponectin is secreted by vascular smooth muscle cells (VSMCs) and adipocytes. Adiponectin promotes the quiescent phenotype of VSMCs leading to less intimal hyperplasia. We hypothesize that diabetic patients on TZDs have better superficial femoral artery (SFA) stent primary patency rates than diabetics not on TZDs.

Methods: Our institution maintains a database for SFA interventions. Patients who underwent primary SFA stenting were identified. We excluded patients undergoing concomitant tibial stenting. Student *t*-test, χ^2 , and log rank were used for the statistical analysis.

Results: We identified 108 diabetic patients who had a total of 118 limbs stented between January 2000 and December 2010. Twenty patients were taking a TZD at the time of their SFA stent. Sixty-five percent of TZD patients were treated for claudication vs 42% of patients not taking TZDs (*P* = .06). Patients taking TZDs were older (mean age, 69.1 vs 63; *P* = .03). No statistically significant differences were identified for hypertension, hyperlipidemia, coronary artery disease, renal insufficiency, history of smoking, and statin use. Survival analysis showed significantly improved primary patency for patients on TZDs (Fig; *P* = .04). At 3 years, TZD primary patency was higher at 86% compared with 55% for diabetic patients not on TZDs.

Conclusions: This translational research study demonstrates the novel finding that diabetic patients on TZDs have better SFA stenting primary

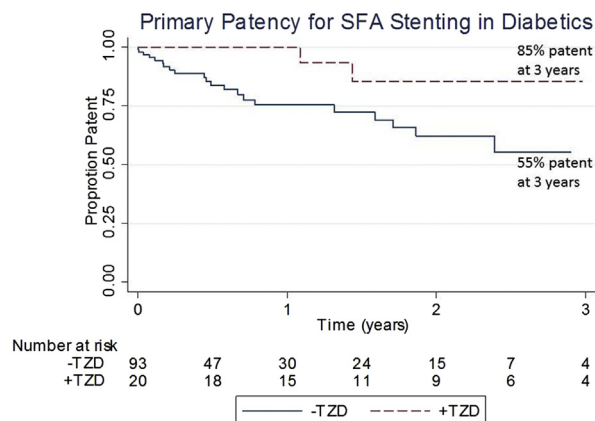


Fig.

patency than diabetics not on TZDs. Improved primary patency leads to less reinterventions and medical cost. Future work will evaluate the usefulness of adiponectin as a biomarker and therapeutic target.

ACE Inhibitors Improve Outcomes in Percutaneous Intraaortic Interventions

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Objectives: The favorable effects of angiotensin-converting-enzyme (ACE) inhibitors on different aspects of cardiovascular disease and management are not well understood. We evaluated the impact of ACE inhibitors on postoperative outcomes in interventions for peripheral arterial disease (PAD) by analyzing intraaortic endovascular procedures from December 2004 to June 2012 in patients taking ACE inhibitors (AI) and not taking ACE inhibitors (NAI).

Methods: Comparisons between AI and NAI were made using χ^2 tests and Kaplan-Meier survival curves. Multivariate regression analysis was performed using the Cox proportional hazard model.

Results: A total of 149 patients (38.3% AI, 61.7% NAI) had 316 index lesions (35.1% AI, 64.9% NAI). NAI were more likely to be female (66.7% vs 33.3%; *P* = .001) and older at time of surgery (69.6 ± 11.5 vs 74.0 ± 12.4 years old; *P* = .002). NAI were more likely to have tissue loss than AI (84.6% vs 72.3%; *P* = .016). The mean follow-up time was 25.07 months. Primary (at 18 months, 53.5% vs 47.7%; *P* = .6) and secondary patency (at 18 months, 87.3% vs 81.7%; *P* = .235) were equivocal in AI and NAI groups. There was a strong trend favoring primary assisted patency in AI (at 18 months, 84.3% vs 70.7% in NAI; *P* = .053) that did not reach statistical significance. Limb salvage was superior in AI (at 18 months, 97.8% vs 85.0% in NAI; *P* value = .025). After controlling for diabetes, hypertension, end-stage renal disease, hypercholesterolemia, coronary artery disease, TASC score, smoking status, age, and tissue loss, AI usage was an independent positive predictor of limb salvage (*P* = .007; relative risk, 0.082).

Conclusions: This data suggests that AI therapy is associated with a beneficial effect on the outcomes of percutaneous intraaortic interventions for PAD. Further understanding of the relationship between AIs and limb salvage may help us improve the management of PAD.

Why Wait? Concurrent Venogram During First Rib Resection for Venous Thoracic Outlet Syndrome Is Safe and Efficient

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Objectives: Surgical treatment of venous thoracic outlet syndrome (VTOS) traditionally involves first rib resection (FRR) followed by interval venogram and balloon angioplasty. This approach can lead to an extended need for anticoagulation and a separate anesthesia session. We present outcomes for FRR with concurrent venogram.

Methods: Retrospective chart review was performed for consecutive patients undergoing FRR with concurrent venogram for idiopathic VTOS from 2/2007 to 2/2013. Venograms were performed immediately after FRR with the arm in neutral and provocative positions. The primary outcome was modification of procedure following venogram. Secondary outcomes were subclavian vein (SCV) patency, duration of anticoagulation, and symptom relief.

Results: Twenty-four patients underwent FRR with venogram with a mean follow-up time of 32.4 months. The mean age was 28.5 years (range, 17-52 years), and 14 (58.3%) were female. All were maintained on anticoagulation prior to the procedure. Concurrent venogram resulted in modification of the procedure in 22 patients (91.7%). Of these, 21 patients (95.4%) underwent balloon angioplasty, and one patient (4.5%) underwent further rib resection. Fifteen patients (62.5%) were discharged after the procedure with no anticoagulation. For those receiving postoperative anticoagulation for persistent minor thrombus, median time for anticoagulation duration was 5.6 months (range, 0.8-28.7 months). Two patients (8.3%) had postoperative bleeding requiring thoracentesis or video-assisted thoracoscopic evacuation of hemothorax. One patient (4.2%) suffered rethrombosis and was successfully lysed open, resulting in a 2-year SCV primary patency of 95.8% and primary-assisted patency of 100%. No patients required reoperation for VTOS and all reported improvements in symptoms. Two patients (8.3%) underwent prophylactic FRR on contralateral side for symptoms and SCV stenosis.

Conclusion: FRR with concurrent venogram is a safe procedure for VTOS that allows for effective intraoperative modification of the surgical plan, resulting in excellent SCV patency, early cessation of anticoagulation, and durable symptom relief.